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Original Articles.

PUS-CORPUSCLES, LEUCOCYTES, LEUKÆMIA AND PYÆMIA.

BY ROLLIN R. GREGG, M. D.

By request, I continue the discussion of the subject of "Pus Dyscrasia" (opened in the February number of the INVESTIGATOR, by transferring to its pages, from the *Independent Practitioner*, the able paper of Dr. W. C. Barrett); and will give the substance of a paper upon suppuration, read by me before the Buffalo Academy of Medicine, at the November meeting of that body.

To my mind, nothing in pathology appears more clear and simple than this whole question, or these various questions, of pus-corpuscles, leucocytes, leukæmia and pyæmia. But in this I may be all wrong, and it may appear to others as little better than the assumptions of superficial knowledge, to make so light of a subject that has baffled the researches of Virchow, Rindfleisch, Niemeyer, and many other very able investigators. All such considerations aside, however, it seems to me there are many facts upon which we can fasten definitely and positively, that will go a long way towards settling satisfactorily many of the essential points at issue.

Viewed from every standpoint but one, the whole subject looks uncertain, confused, and greatly complicated; from that one point of view, on the contrary, all is clear, simple and rational. That one point is the *fact* that the red blood-corpuscles are *decolorized* within the body under various circumstances, and thus brought to the appearance of pus-corpuscles, white or colorless blood-corpuscles, leucocytes, or whatever else they may be called—a fact in connection with the subject that has hitherto been totally neglected by the profession, excepting what little the writer has done to elucidate it.

But before proceeding further, I beseech all investigators and writers who are giving the matter attention, to abandon going inside to the remotest and most hidden recesses of life and disease, where they can see nothing that is transpiring, but must *guess* at all; abandon all that, I repeat, and come to the surface, where we can *see* and *know* just what is going on.

In other words, let us take a common boil to illustrate the most important branch of our subject, or that of suppuration, under all circumstances. In it we can see what transpires. The pus-corpuscle from a boil all will concede to be as typical a representative of a purely pus-corpuscle as can be selected. Well, now, how is that corpuscle produced? The boil, or rather the capillary blood vessels and the small arteries and veins in the tissues where the boil is situated, become greatly congested and distended with *red* blood-corpuscles. The extreme distension by the red corpuscles of great numbers, or of all the capillaries, arteries and veins of the parts implicated, is what causes the swelling that we call a boil.

Cut into the boil at any time *before* suppuration has commenced, and what do we get as a discharge from it? Nothing whatever but red blood-corpuscles and serum. Cut into it *after* suppuration has been completed, and what do we then get? Nothing but *pus*-corpuscles and serum, besides some natural cells from the dissolved tissues,—unless we open small blood vessels where suppuration has not yet taken place, in which case we get red blood-corpuscles mingled in the discharge with pus-corpuscles.

Now, another point must be borne distinctly in mind, if we would know exactly what we are about in considering this subject, and not

be led away in a fog of guessing or surmising this, that or the other thing—which is at once the end of all accurate or scientific knowledge. That other point is as follows: There has been absolutely no movement, or movements, in the red blood-corpuscles that first constituted the boil, from the time their congestion in the boil was fully established, until *their discharge at the end of suppuration* as PUS-CORPUSCLES. What, then, has taken place to cause such a change? Why, simply this: The red blood-corpuscles have been *decolorized*, that is, have had their coloring matter, or hæmatin, washed or dissolved out of them, under the process we call suppuration, and by that process have been brought to colorless or slightly yellowish corpuscles, which we call pus-corpuscles. And this is all there is of this subject, over which so much doubt and mystery has been expressed, and such fierce controversies been held.

To confirm the foregoing assertions and establish their truth, it is only necessary to cite the fact known to every pathologist, namely: that under full or complete inflammation, like that of a boil, stasis, or a complete stagnation in the further movements of the blood-corpuscles (at least through the vessels in all the central portions of the congested mass) is the result. And every anatomist and physiologist knows there are no secret or hidden channels, aside from the blood vessels, through which the red blood-corpuscles are, or can be, spirited away, or other secret and hidden channels through which the pus-corpuscles are, or can be, brought there to be deposited—and at the same instant of time that the red corpuscles disappear, and in their exact ratio or quantity.

What, then, becomes of the red corpuscles in the boil, if they cannot move from where stagnated under the congestion and inflammation, until suppuration is completed; and whence come the pus-corpuscles that so rapidly take their place after suppuration begins? Why, I repeat, we have the whole fact fully and clearly explained in the simple idea of the former, or red corpuscles, being *decolorized* by the serum percolating among and through them while stagnated, and thus carrying or washing away their hæmatin, which completes the process of suppuration. Then the walls of the capillaries, arteries and veins involved give way under want of nutrition,

succeeded by solution of their continuity, the stagnated corpuscles flow together in mass from the broken vessels, and finally suppurate through the skin, when they are discharged off as so-called pus-corpuscles, but really as decolorized blood-corpuscles, and nothing more.

As well for what is here stated, as for what is to follow when we come to consider leucocytes, the reader should know, if he does not already, that the proof is entirely beyond question that the colored corpuscles of the blood are always distended from their natural disk shape to the full globular form, by the suppurative process which decolorizes them; and that they are thus brought back, in this first step of retrograde metamorphosis, to more or less of their appearance as chyle-corpuscles, just before they became red blood-corpuscles.

There would appear, therefore, to be no other possible solution to this branch of our subject than the one given; and this at the same time furnishes us the key to *all* suppurations and formations of pus-corpuscles everywhere, internally as well as externally. That is to say, precisely the same order of events transpires internally, whenever and in whatever organ inflammation that goes on to suppuration arises, as takes place in the boil, and the decolorized blood-corpuscles are discharged at the end of suppuration as pus or pus-corpuscles through the nearest or most easily approached natural outlet; or they make an outlet of their own, by dissolving down the tissues, to and through the surface of an organ, or to and through the surface of the body, as the case may be.

This is the way abscesses of the lungs, liver, kidneys, and other internal parts, as well as of the joints and of the muscular system, work and are produced, and such the source of the pus or pus-corpuscles from them all.

How simple, too, this idea renders one of the most common of every-day occurrences in disease, which I believe has never before been satisfactorily explained. I allude to common colds. A cold is taken and settles in the nostrils, throat, or bronchi. What are the results? The minute blood vessels—arteries, veins and capillaries—of the mucous membrane of the part or parts attacked, be-

come congested, often to their utmost capacity, inflammation immediately follows, suppuration succeeds, and the cold "breaks up" in a discharge or expectoration of yellow or purulent matter; in other words, the red blood-corpuscles here again become decolorized, slough their way out of the vessels and through the mucous membrane, to be discharged as pus-corpuscles, when we get rid of their irritating presence and get well. When the red corpuscles become congested and stagnated in a part and remain there but a short time, a few days at most, they are dead or dying bodies, and must be discharged, in order that we may get well. The longer they remain, the more irritation they produce, and the worse the results.

There are still other simple facts also in connection with inflammation that are as simply explained by this view of our subject. For instance, all know how highly colored the urine becomes under almost all inflammatory conditions; and yet, as common as this is, no satisfactory explanation has ever hitherto been given of it. Well, all there is of this part of the subject is this: The hæmatin of the red corpuscles that is dissolved out of them in the processes of inflammation, is carried along through the veins leading from the inflamed part into the general circulation, then to the kidneys to be excreted, thus coloring the urine so much more highly than natural. The unnaturally dark color of the fœcal discharges from the bowels, which every physician knows is very common, if not universal, in inflammatory diseases, is explained in the same way.

The foregoing order of events applies of course, as should be understood, to inflammation when it ends in suppuration. When resolution, on the contrary, takes place, or is brought about, and suppuration avoided, the constriction of the veins or other obstructions that held the corpuscles stagnated in the inflamed part, give way, the latter or corpuscles move on into the general circulation, where those that have died, or had their vitality seriously impaired in the operation (as most of them have), are disintegrated, if the resolution has been brought about by strictly curative measures, and are then cast out through the bowels, as refuse and fœcal matter; but if the means of relief have not been curative, then these dead and dying corpuscles are re-deposited or re-con-

gested in some other and generally more vital part, to cause inflammation of a still more dangerous character, or the whole process degenerates into the chronic form and lays the foundation of some chronic disease, as tuberculosis, or other equally serious, or at least too often fatal condition, as will be more fully shown before we close the subject.

(*To be continued.*)

FRACTURE OF THE CLAVICLE, AND ITS MODERN TREATMENT.

BY S. W. WETMORE, M. D.

The literature of fractures of the clavicle abounds with descriptions of a great variety of appliances for their reduction and treatment. Some of these have an antiquity dating back as far as the days of Hippocrates, Celsus, Dupuytren, Flaubert, Lizars, Pelletan, Cooper, Dorsey, and Desault. The methods adopted by Lonsdale, Keckerly, Hunton, Welch, Desault, Fox, and others, have been very closely followed by surgeons of the last century; but it remained for the "men of our times" to introduce the most effective, simple, practical, and satisfactory retentive measures. Thorough teachers in surgery must be well versed in topographical anatomy. It was this practical knowledge of the human economy, together with a sort of inventive genius, that led to a most rational method of treating this injury, thereby doing away with the hitherto most irksome and unbearable appliances.

Fractures of the clavicle are most frequently produced by falls upon the shoulder, and in consequence of the peculiar shape of the bone (resembling the italic letter *f*), the solution of continuity is in an oblique direction, and usually in the middle third, the obliquity running from above downward and inward towards the sternum.

If the fracture is complete, the shoulder is depressed and drawn forward by the action of the pectoral muscles, while the inner portion, or the sternal fragment, is most prominent, and sometimes perforates the tissues sufficiently to constitute a compound fracture, though this complication rarely occurs.

That we may the better comprehend the obstacles with which we have to contend, let us familiarize ourselves with the origin, insertion and action of the great pectoral and sterno-cleido-mastoid muscles.

The last named muscle being attached by one of its heads to the sternal third of the clavicle, and taking its fixed point for contraction at its insertion, the mastoid portion of the temporal and superior curved line of the occipital bone, it would naturally raise the sternal fragment.

The pectoralis major arises from one-half the sternum, its whole length, from the cartilages of all the true ribs, excepting the first and last, from the aponeurosis of the external oblique muscle of the abdomen, and from the sternal half or two-thirds of the clavicle.

From this broad origin the fibres converge to be inserted into the anterior bicipital ridge of the humerus, occupying a full inch and a half vertically.

The peculiarity of the muscle is that its upper fibres become undermost at its insertion and its under fibres become uppermost, the muscle thus making a half turn upon itself, forming a well-rounded lower border which bounds the anterior axillary space.

From this description it must appear obvious that the clavicular fibres of this muscle are the direct antagonists of the sterno-cleido-mastoid, and the further the humerus is carried backward, the greater the tension of these fibres, and the more perfect the restoration of the fragments.

The depression of the shoulder, produced by its own gravity, and the shortening of the clavicle by the pectoralis minor, are antagonized by carrying the scapula upward and backward as near the vertebral column as possible.

The elbow figure 8 bandage introduced by Prof. E. M. Moore of Rochester, a description of which was published in 1870 in the Transactions of N. Y. State Medical Society, meets all the requirements in a simple fracture of the clavicle in the middle third, which is the most common, and the only one under consideration.

He says: "To treat fractures well, we must be able to find our appliances in every house; and after much experimenting, I use a

shawl, or piece of cotton cloth, which, when folded like a cravat eight inches in breadth at the centre, should be about two yards long. Placing this at the centre across the palm of the surgeon, he seizes with this hand the elbow of the patient, which corresponds with the broken clavicle. The two ends of the bandage hang to the floor. The one falling inward towards the patient, is carried upward in front of the shoulder and over the back, making a spiral movement in front of the shoulder. This is entrusted to an assistant. The outer end is then carried across the forearm, behind the back, over the opposite shoulder, and around the axilla. This meets the other end, which may be carried under the axilla and over the shoulder of the opposite side, thus making the figure eight (8) turn around the sound shoulder. This twist, it will be seen, makes also the figure eight (8) turn around the elbow of the affected side. The forearm should be sustained by a sling which raises it to an acute angle, in order that gravity may assist in moving the whole arm backward. This is best done by a simple strip three or four inches wide, which may be pinned to the shawl at the shoulder, or

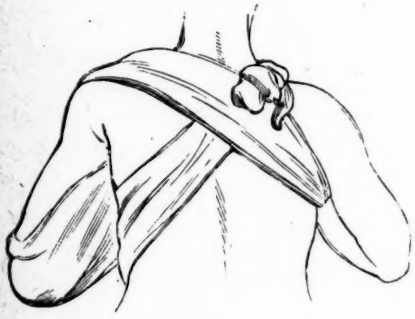

Fig. 1.

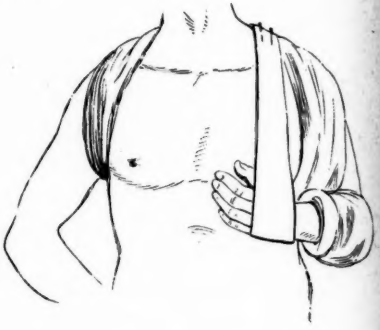

Fig. 2.

by a sling across the opposite shoulder and behind the back—the former much to be preferred (see fig. 1 and 2). It will be observed that the shawl, as it passes in front of the arm, does not press on the axillary border of the pectoral muscle, and therefore avoids the objection of the ordinary figure eight (8). As it passes over the

forearm and over the opposite shoulder, it lifts up the arm like the ordinary shawl bandage."

We have been thus explicit in giving the manner of application in the doctor's own words, and reproduced his cuts, for it cannot be better expressed nor clearer demonstrated. After having treated every case that has come under our observation for the last ten years in accordance with the rules above suggested, and never having had an unsatisfactory result, we most heartily recommend it to our students and the profession.

Its advantages over every other method with which we are familiar, are: 1st, the apparatus is readily obtained and found in every house; 2d, it can be applied over the ordinary clothing; 3d, it is readjusted easily when it becomes disarranged; and 4th, any attendant can be instructed so as to readily keep it in place.

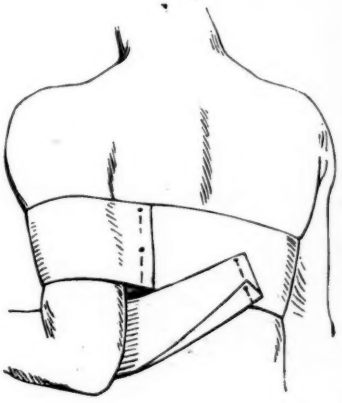

Fig. 3.

Prof. Louis A. Sayre of New York treats fractures of the clavicle upon the same principle as above delineated, viz: *putting the clavicular portion of the pectoralis major muscle on the stretch*, and compelling it to pull the clavicle in place.

His manner of dressing is as follows: "Strong and good adhesive plaster (Maw's moleskin is the best) is cut into two strips three to four inches wide (narrower for children): one piece long enough to surround the arm and go completely around the body, the other to reach from the sound shoulder around the elbow of the fractured side and back to the place of starting. The first piece is passed around the arm just below the axillary margin, and pinned or stitched in the form of a loop sufficiently large to prevent strangulation, leaving a portion on the back of the arm uncased by the plaster. The arm is then drawn downward and *backward* until the

clavicular portion of the pectoralis major is put sufficiently on the stretch to overcome the sterno-cleido-mastoid and thus pull the inner portion of the clavicle down to its level. The plaster is then carried smoothly and completely around the body and pinned to itself on the back to prevent slipping, as seen in fig. 3.

"The first strip of plaster fulfills a double purpose: first, by putting the clavicular portion of the pectoralis major muscle on the stretch, it prevents the clavicle from riding upward; and secondly, acting as a *fulcrum* at the centre of the arm, when the elbow is

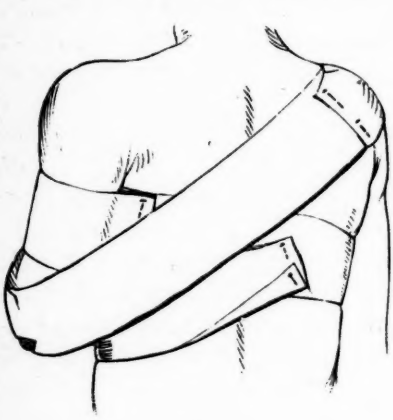

Fig. 4.

Fig. 5.

pressed downward, forward aud inward, it necessarily forces the other extremity of the humerus (and with it the shoulder) *upward, outward* and *backward;* and it is kept in this position by the second strip of plaster, which is applied as follows: commencing on the front of the shoulder of the sound side, drawing it smoothly and diagonally across the back to the elbow of the fractured side, where a slit is made in its middle to receive the projecting olecranon.

"Before applying this plaster to the elbow, an assistant should press the *elbow well forward and inward* (see fig. 4), and retain it there while the plaster is continued over the elbow and forearm (pressing the latter close to the chest and securing the hand near the opposite nipple); crossing the shoulder at the place of begin-

ning, it is there secured by two or three pins, as seen in fig. 4 and 5. When this has been done, the deformity will have entirely disappeared, the fractured bone will be accurately adjusted, and as long as the strips of plaster maintain their position, no amount of force can displace them."

The above, including the cuts, was taken from Prof. Sayre's monograph on this subject.

It will appear obvious to any one interested in the treatment of this most interesting lesion, that the key to its successful management is in making the clavicular fibres of the great pectoral muscle tense, and keeping them so during the period required for repair. *No method can be successful, if the humerus be allowed to maintain a perpendicular position.*

The plaster method of retention has some advantages over the shawl or cravat mode. It is evidently the more secure, firm and unyielding (very desirable qualities, particularly with children that cannot be seen frequently), and the patient presents a more comely appearance when dressed. Its disadvantages are, the surgeon, and particularly the country practitioner, does not always have with him the plaster. In hot weather the plaster is apt to excoriate and become irksome and unpleasant; again, if sufficient traction be made upon the humerus to be of any utility as a lever, it necessarily becomes tedious to bear, and the patient tires of the constant strain. We have not, however, had sufficient experience with the plaster to feel qualified to criticize very closely. Each method has been before the profession for at least ten years, and yet there are very few surgeons who are familiar with either.

It behoves us as teachers, authors, editors and practitioners, to keep before the medical world those remedial measures which experience has proven most perfect. Although we may not be able to advance anything new, we can prevent the introduction of fancies which may crowd out well established facts and principles. With this view of the needs of the profession, we feel justified in occasionally reproducing truths that cannot be overthrown.

"SCIENCE VERSUS THEORY."—A REPLY.

BY G. L. CHAPMAN, M. D., POLO, ILL.

I have read with considerable interest Dr. Pomeroy's articles, wherein he attempts to prove that homœopathy is the science of therapeutics. I wish to meet the Doctor on his own ground of "tolerance" and fairness; certainly on no other. I can readily endorse the Doctor's idea that "no advancement can be had without a conflict of opinions and views." I enter upon this "conflict," and pass my opinion and give my views, wishing to do so in a spirit of fairness, without being prejudiced either way. There is certainly no schism between the Doctor and myself arising from educational influences. I have no school to defend against his—"Is he a Hebrew, so am I." I only think the Doctor's zeal for the cause has led him out into water so deep that he cannot fathom it. I still claim that science demands more facts than we possess in the realm of therapeutics, else we could silence all other schools; we must concede them *some* facts, while we claim *more* for ourselves. It may be there is some good in all the schools, while *perfection* does not perch on any banner. This I say in a spirit of "tolerance" and fairness. The Doctor says Hahnemann is a second Newton. I do not think Hahnemann has done as much for therapeutics as Newton did for astronomy; possibly in the end, as Mark Taply says, "he will come out strong." But I was speaking of the time when the Doctor wrote his article. The Doctor says the "rifle shots of Dunham, Lippe and Hering are at once prophetic and the fulfillment of prophesy." Now, with becoming deference, I would say that these *occasional* "rifle shots" of a few men—say three—do not constitute a science. If they can make these shots, and repeat them to the satisfaction of others, and explain the law that enables them to do so in so clear a manner that others can follow them, *then* I will concede the science. Other sciences submit to such tests.

These *occasional* "rifle shots" are no proof of science. John E. Owens once said on the stage, "A blind hog could pick up an acorn —*occasionally*." These "occasionals," compared with the steady, clear light of science, are about like the light of some straggling comets in contrast with the sun: there is too much darkness between—we are obliged to "feel our way" too much.

In my previous article I said I had been striving after the art of therapeutics for many years. Has not Dr. Pomeroy been doing the same thing? I will further say I do not expect to live long enough to see its science. Does Dr. Pomeroy? The Doctor says I have "put the cart before the horse, that is, art before science, inasmuch as a science *must* underlie art;" I will admit that science underlies art. Will the Doctor admit that we have to dig down through art to discover science?

It seems to be a *necessity* that poor erring humanity has to expend so much of time and labor to mine down through the strata of *art*, in order ever to arrive at the crystals of *science*. It is while going through this strata of thought, or experience, that "conflicts" arise; when we reach the last analysis, the lower strata *science*, "conflicts" will cease.

The Doctor admits that science underlies art; then he will also admit science to be the first formation, and that art is superimposed. Then how shall we find the science without first delving through the art? This last proposition I believe to be true of all human experience. I know of no single instance where a *science* was discovered before its *art* was known. Does Dr. Pomeroy know of even *one?* Men practiced the art of chemistry before they understood the *science* which the balances and combining numbers afterwards taught them; men practiced the art of astronomy, predicted returns of comets, the phases of the moon, and solar eclipses, long before astronomy reached a science under Newton. If I put the cart before the horse, I put it as we find it in nature. Men reach first principles *only* through the long and toilsome struggle with *art*. The man who *jumps* at first principles, does not always alight where he expects to—it is "taking a leap in the dark." I would it were otherwise. In therapeutics we are yet running through the stratum of art; we are in the realm where conflicts arise. To use a sailor's phrase, we are passing through the "storm-belt." How long we shall be in making the entire passage, I do not know; but one thing I *do know:* we are in it *now*. That we have *not* reached our destination, our *science*, is proven by the appearance of these articles in the INVESTIGATOR.

IODINE IN DIPHTHERIA.

BY S. H. MOORE, M. D., BUFFALO, N. Y.

The *Independent Practitioner* of Baltimore, Md., for March, quotes from the *Chicago Medical Review* an article on the use of iodine in diphtheria, by Dr. H. P. Gauthier, of St. Paul, Minn., in which he says that he has treated in all over three hundred cases of diphtheria successfully with the tinct. of iodine. For over fourteen years I have successfully treated diphtheria with iodine. In the *Medical Record* of New York, for June 17, 1876, may be found an article written by myself on the treatment of diphtheria with this remedy. My formulæ is: Tinct. iodine ʒ j, syrup simplex. ʒ vij; dose, one-half to one teaspoonful, to be given every fifteen minutes in severe cases. During the winter of 1875–6 I successfully treated sixty-three cases of diphtheria with the iodine. The iodine prevents the further formation of the membrane; it also prevents the swelling of the glands of the throat, and stimulates the patients, as in no case (under my care) was there the great loss of strength that we usually find in diphtheria. The iodine, when combined with the simple syrup, is pleasant to the taste, and can be retained on the most delicate stomach. The mixture becomes almost as transparent as water in from six to twelve hours. The remedy is simple and sure, and as such I will recommend it to the profession.

[Prof. Bartholow, also, in his *Practice of Medicine*, recommends "liquor iodinii comp." in 1 to 5-drop doses every four hours.—A. A. H.]

SEWER GASES.—VENTILATION OF SOIL AND WASTE PIPES AND UNDER-DRAINS.

BY H. M. PAINE, M. D., OF ALBANY, N. Y.

Diseases resulting from the inhalation of sewer gases.—While there is no question regarding the obscurity which shrouds the origin and development of many forms of severe and frequently fatal diseases, there is abundant evidence showing the disease-producing power of germ-ladened sewer gases in dwelling houses. Many ex-

periments are being conducted with a view of determining the sources of disease originating in, and in any way connected with, the ventilation and drainage of buildings. The subject is one of very great practical importance. It involves the sanitary condition of dwelling houses, stores, offices, and factories and churches; in fact, all habitable buildings. The air in few dwellings is free from contamination of greater or less intensity.

The more common forms of septic diseases produced by the inhalation of foul gases are: Remittent, intermittent or continued gastric, bilious, typhoid or typho-malarial fevers, meningitis, and in fact all diseases having a malarial origin. They are sometimes called "filth" diseases, and are also designated "zymotic," or those occasioned by a "ferment in the blood."

They are frequently very active, malignant, and rapidly fatal. They apparently produce an entire decomposition of the normal constituents of the blood within the period of a few days.

In other cases they act as disturbing influences through many months or even years. These are the cases in which the parties suffer, sometimes intensely, while still able to attend the daily routine of labor.

The more prominent features are chiefly : Mental depression; unrefreshing sleep at night, and sleepiness during the day; loss of will-power; inability, without great effort, to concentrate thought upon any subject; listlessness; loss of physical energy; headache; dizziness; feeling of fatigue; pain and soreness in every part of the body; coated tongue; foul breath; loss of appetite and craving for improper articles of food; nausea; faintness; and paroxysms of chilliness, feverishness and thirst.

Sometimes the poison appears to seize upon the local mucous membrane of the throat and air passages, causing inflammation, ulceration, quinsy or diphtheria. In others it acts more generally upon the system, and is manifested by the presence of boils, carbuncles or erysipelas. Sometimes it concentrates its influence upon the liver, causing a suppression of bile, producing a sallow complexion and jaundice; or a changed condition of bile, resulting in constipation, diarrhœa or bilious colic.

It is not to be inferred, however, that the presence of these symptoms or conditions is in all instances a direct result of sewage contamination. Their influence may be simply that of predisposing the system thereto. In the absence of other more prominent or direct causes, this one should have due consideration.

Careful observation establishes the presumption that diphtheria so frequently depends on this germinal source, that in all cases it is safe to assume the presence of local septic cause.

As far as my observation has extended, I can emphatically state that I do not recollect having witnessed or treated a single case of typhoid fever within the past ten or fifteen years in any house in which there has not existed a defect, either in the ventilation of the soil-pipe or in the imperfect construction of the under-drains.

Many instances of serious and fatal diseases have come under my own observation, not only in the tenement houses of the poor, where sources of contamination are almost unavoidable, but in the very best and most costly dwellings, in which every possible precaution against this very defect had been taken. Cases of severe, and very frequently fatal diseases, whose origin is directly traceable to this source, are constantly occurring in the practice of every physician.

Error regarding the source whence sewer gases originate.—The trap in the street drain an insufficient protection.—It is a common belief that the sewer gases in houses are for the most part formed in the large sewers or street drains, where they are supposed to accumulate and by expansion are forced backward into the dwellings. Hence many property owners, overlooking the principal source of danger, believe they and their tenants are afforded ample protection against the ingress of sewage effluvia by the insertion of a suitable trap in the drain leading to the street sewer.

The water in the trap is an insufficient protection: in the first place, when, by the sudden influx of a large volume of water, caused, it may be, by a copious shower, the main drain or sewer is too small to carry off the accumulations with sufficient rapidity; or, the lower end being entirely submerged, as very frequently happens at high water, when drains empty into rivers or running streams, there is no escape for the foul gases in the drains, except backward and up-

ward into the dwellings, through the crevices in the drains, or, if these are sufficiently tight, through the water in the traps. In the second place, the trap becomes an inadequate protection when on a sudden withdrawal of the large accumulations in the main drain a partial vacuum is produced, often of sufficient force to draw the water by suction out of all the traps for a long distance back from the outlet of the main sewer. When this occurs, there is for the time being no barrier whatever to a free ingress of contaminated air into the dwelling houses.

It is readily granted that this trap is a very important safeguard in all cities and large villages, where an extensive and complex system of under-drainage becomes a prolific source of contamination by generating, confining and concentrating within circumscribed limits these intensely poisonous gases, which are only rendered harmless by freely blending with pure air.

Greater danger from gases formed in soil and waste pipes within the houses than from those generated in street sewers.—It is found by many sad experiences that a prolific source of danger arises from the putrefactive decomposition of matter deposited on the inner surfaces of the waste pipes within the house, a short piece, only a few feet in length, being frequently sufficient to contaminate the air in any ordinary dwelling.

The following extracts in quotations* contain many practical statements regarding the sources of danger, and also the best methods of avoiding them, the only weak point therein being that the author takes the supply of fresh air from the cellar of the building. It is without question a better plan to place the short ventilating pipe out of doors, because the gases being frequently heavier than ordinary air, would flow directly into the cellar.

A small section of unventilated waste pipe sufficient to contaminate the air of any dwelling.—"The true source of this evil is to be found in the DRAIN PIPES of the house itself, whose interior surfaces are coated with fermenting matter deposited there from the fluids and solids which pass through them; and so great is the productive

* "Sewer Gas in Houses: Its Origin and Prevention." By E. N. Dickerson. New York *Medical Journal*, April, 1879.

power of these coatings, that LESS THAN ONE-HALF OF A SQUARE foot of the interior of a pipe, which never had anything in it except the discharge water from a bath-tub in use about six months, will generate enough sewer gas to render a house unfit to occupy."

The soil pipe in dwelling houses is usually twenty or thirty feet in length, and portions of it are frequently so located near heater pipes or chimneys, as to cause an elevation of the temperature of their contents far above that of the same gases in the pipes and drains under the ground. It is well known that the higher the temperature, the more rapid the process of decomposition; and the greater the accumulation of gases, the greater the pressure, and the larger the amount that escapes into the dwelling. It is also true that the presence of deleterious gases in a building cannot in all cases be detected by the odor. There may be sufficient concentration of nearly odorless gases in the dwelling to induce serious, and even fatal, disease in those who are specially susceptible to their influences.

Wate pipes closed at the top are prolific generators of sewer gas.—"As the plumbing in houses is generally organized, the great amount of sewer gas generated at the surfaces of the entire system of pipes forces its way into the house; because the whole pipe system is closed up inside of the house, except where the basins empty into it, and a deep trap is placed at the lower end of the soil-pipe, and between the house and the sewer. As the gas is generated in this *ramified retort*, it must either force its way out through the street trap (or, in the absence of a trap, the denser, because cooler, gases below become an effectual barrier in that direction), or through the feebler basin traps of the house, or through defective joints in the plumbing work; and, inasmuch as the street trap resists the most, THE GAS GOES INTO THE HOUSE."

Care required regarding discharge pipes from bath-tubs.—"As usually constructed, bath-tubs are provided with an overflow-pipe, leading out from the tub near its upper edge, through an opening in the metal which is covered by a stellated shield. This pipe joins the discharge pipe, passing out from the bottom of the tub and leading

to the soil-pipe; and a trap is then placed in that pipe just beyond the junction of the two. When this trap is filled with water, communication is intercepted between the bath-tub nnd the soil-pipe, but there is an open communication from the discharge aperture in the bottom of the tub through the overflow-pipe to its aperture near the top of the tub, so that air can be circulated through this passage. By applying to the discharge opening in the bottom of the tub an India-rubber tube, or any other convenient pipe, and blowing through it with the breath, the gaseous contents of this overflow-pipe will be driven out through the overflow aperture, AND THE SICKENING ODOR WHICH WILL BE PERCEIVED WILL DEMONSTRATE THE EXISTENCE OF SEWER-GASES IN THESE PIPES."

Two traps in the same pipe a fruitful source of mischief.—"But, generally speaking, and in all cases where I have examined the construction in large houses, there are considerable lengths of waste pipes which lead from wash-basin traps into water-closet traps, and which, therefore, are not in direct communication with the soil-pipe. This construction is preferred by plumbers, because, under the theory that sewer gas comes from sewers, and must be intercepted in its passage to the basins, this arrangement supplies *two traps* instead of one, and therefore makes it certain that no street sewer gas will force its way through both, even if it blows in through the street trap. In these double-trapped drain pipes all the gas that is generated is under pressure, and it escapes through the weaker basin in bath or wash-basin traps, although there may be no pressure in the soil-pipe itself beyond the second trap. THESE PIPES ARE A FRUITFUL SOURCE OF SEWER GAS IN HOUSES."

Basin water-closets always defective.—"Basin water-closets, also, are prolific sources of gas under any possible system; because the trap under the basin is always charged with excrements, and the fermentation which occurs from the basin side of the trap must necessarily expel the gas, either through the water-seal in the basin, or out of the open hole in the hopper through which the spindle that works the basin passes. These closets are an abomination under any circumstances, and should be always removed and substi-

tuted by some of those closets of the Pierson or Jennings type which have no traps, and in which an India-rubber-seated valve closes the passage air and water-tight, and is covered by a water-seal."

Waste-pipes from sinks require ventilation.—It is an error to suppose that buildings in which there are no water-closets do not require the ventilation of the waste-pipes from the sinks. Several of the most obstinate cases of chronic jaundice, also cases of frequently repeated attacks of bilious colic that I ever witnessed were undoubtedly occasioned by the escape of sewer gases into houses having no adequate protection of the kind described.

(*To be concluded.*)

Correspondence.

FUNDAMENTAL REQUISITES FOR A GOOD PHYSICIAN.

Mr. Editor:

I am well assured that it is your earnest desire and also the aim of the College with which you are associated, to do all that may be done to elevate and ennoble the medical profession. In this purpose you have the earnest sympathy of all classes of society. There is no profession in which a more general interest is felt. There is no other profession toward which afflicted humanity lifts its helpless hands in such earnest and tender appeal. That this appeal may be no less hopeful than earnest, should be deemed desirable by every student, practitioner and professor. The words upon your title page—"Devoted to the best interests of the profession"—are too limited in their meaning, unless those interests are defined as including the best welfare of the public at large. For whatever may be the claims of your profession upon society,—and they are worthy of its highest appreciation—they are, at least socially and morally, balanced by the claims of society upon it. In order that these mutual claims may be honorably met, the highest standards cannot be too rigidly maintained. They should reach even the actuating motive. For the student who enters upon this

profession in the leading animus of selfish ends, the physician whose chief endeavor it is to coin out of it a pecuniary fortune, and the college which is emulous of sectarian preferment, must, and ought, eventually to fail of public sympathy and support.

To the pre-requisite of superior native abilities must be added an ardent love for the acquirement of truth, else the intellectual task will be dry, dreaded, and difficult, and the lowest possible degree of attainment will be made to suffice. In this respect every preceptor should guard vigilantly the outer door of this temple of learning.

Every true physician must be a born philanthropist. The peculiar relations and duties of his calling are such that no motive less worthy than that born of love of truth and humanity, can render him worthy of it or successful in it. Without this a profession including so many elements of sacredness, degenerates to the grossness of mere business traffic, and perverts its true mission by unworthy and misguided ambitions. The calling of the physician leads him close to the human heart. In its hour of extremity it must confide to his keeping the interests which it most tenderly cherishes. For, what concernments other than those which can only be confided to the Physician of souls, are more dear than life and health, with the manifold interests that depend upon these, and the lives and health of our children and friends? Perhaps life were not so precious, nor death so unwelcome, did each human being stand isolated from all others; but in view of those relations which link human hearts and human interests so tenderly together, life is something unutterably precious, and death unutterably appalling. While he who presumes to touch such interests as these without the highest professional preparation and skill, is a reckless adventurer, the physician who takes them in charge with no purer motive than that of the miser who clutches for gold, is a moral monster whom no amount of professional learning can render fit for, or worthy of, his profession. Besides, the world will only love and honor its benefactors, and not them, unless it discover in the benefaction the quality of unselfish and philanthropic generosity. For this it pays promptly, and ever, never ceasing to ask if it has cancelled the debt. To be worthy of his profession, and to meet the just demands of so

ciety, the physician must be a man of general intelligence and thorough culture; he must possess the intellectual grace and refinement, and especially the facility and clearness of judgment which can only be acquired by the discipline of thorough scholastic attainments. Mere "cramming" in the special line of his profession will not suffice. The doctor who is educated only in medicine can at best but mechanically use tools which better minds have furnished and unwisely placed in his hands. With these, but without disciplined skill and judgment, he will strike many a miguided and fatal blow. Such a physician cannot benefit sciencs by new contributions: he has nothing to give; he can only receive. He cannot be a discoverer, safe of his own unfitness; for if he step aside from the beaten path, he is at once bewildered and lost. The sole discipline of the farm or shop is scarcely an adequate foundation for a learned profession. Cramming does not educate, and if an empty mind be filled with all the facts and all the technology of an art or profession, it still remains, save, perhaps, in the faculty of memory, an uneducated and undisciplined mind. Since medicine can hardly rank as an exact science, it has all the more need of the personal wisdom which comes of severe intellectual training.

If we consider the medical profession in its social relations, the importance of intellectual culture cannot fail to be observed. The physician has social privileges peculiar to his profession. Sickness is not a close respecter of persons; wherever it goes, the doctor must follow. He is thus sometimes made welcome in circles from which his want of other than professional fitness would exclude him. And here must come the humilating consciousness and disclosure of all his deficiencies. All shams are detected in this crucible; neither the impudence of brassiness, nor the bravado of pedantry can disguise them. He may affect technical lore with the volubility of an idiot, or resort to pretentious quotations of Latin and French, learned from some glossary of foreign phrases. It is of no avail, but discloses itself as the trick of the ass to conceal himself in the skin of the lion. There is no sight more pitiable than to see ignorance strive to conceal itself, or transform itself into wisdom, in the presence of the learned and wise.

The truth is the science of medicine, and belongs to the learned professions. Society expects and demands that it shall be truly learned. It discovers that the crammed ignoramus is out of place in it, and degrades it. And while he must ever be a humilation to those who placed him within it, society also is fast learning to resent the imposition of his professional pretensions. And in this society is not ungenerous, but only just; it will respect and honor him at the plow, but despise him in those higher walks where only the feet of wisdom should tread. J. J. B.

WHICH DID HE MEAN?

Editor Investigator:

I recently read an article written by W. C. Barrett, M. D., D. D. S., M. D. S. (I think these are all the titles), on "Anæsthesia." The article was quite well written. Of course we are all aware that the value of such an article consists in its veracity. A series of scientific experiments, to possess real merit, must be conducted in such a manner, and be based upon such data, as to leave not the slightest opportunity to "go behind the returns," so to speak. Otherwise the report is *nulla bona*. I notice in the Doctor's experiment No. 9, he speaks of anæsthetizing a bitch in the *second* or *third* month of pregnancy. Upon opening the uterus, he found the *quarter-grown* fetuses, and notes the effect of the anæsthetic upon them through the maternal circulation. I should be pleased to have the Doctor give the period of utero gestation in a bitch. When I read physiology years ago, I understood that the gestative period of the bitch was *nine weeks*. How long, Doctor, since it changed to eight or twelve months? But perhaps the Doctor experimented with a new kind of bitch. A little more scientific exactness on the bitch, Doctor. DENTINE.

WHAT "THEY SAY."—PROFESSIONAL OPINIONS OF US.

Editor Physicians and Surgeons' Investigator:

I am glad that you have established a scientific and progressive medical journal, and that it is not to be a journal of pure homœo-

pathy. I have practiced medicine for many years, but I have never been an advocate of "pure homœopathy," because it is not practical or possible to strictly adhere to the law of similars in all cases at the bedside. I am glad that you have in Buffalo a journal and a medical college where the whole science of medicine is taught, and where graduates are not only instructed in the principles advocated by Hahnemann, but are also instructed in the principles and practice of the dominant school as well. F. G. COMSTOCK.

St. Louis, March 30, 1881.

Mr. Editor:

Your excellent and timely editorial, "To our Readers," must be appreciated, maintained and propagated by all honest and rational practitioners, and men and women, whose minds are not perverted by vanity or unreasonable speculations. Only under the condition of perfect freedom of opinion can science prosper, and such conditions as you so well define are necessary for a harmonious effort of all educated physicians towards a scientific method in therapeutics. The PHYSICIANS AND SURGEONS' INVESTIGATOR does a noble work. CARL H. HORSCH.

Dover, N. H., Feb. 28, 1881.

Selections and Abstracts.

TREATMENT OF ASTHMA WITH THE INDUCED CURRENT.

Dr. I. Burney Yeo relates in the *Lancet* his experience at Neuenahr, where he saw the induced current used in the treatment of asthma. It sometimes acted like magic, curing the cases completely in a week or two. The electrodes are applied usually on each side of the neck, about an inch below the angle of the jaw. The current must be of good strength, so that the patient can feel the stream go across the larynx and soft palate. In bad cases it should be applied twice a day, from fifteen to thirty minutes each sitting. Dr. Max Schaeffer, who first advocatcd this treatment, found that the constant current never did any good.—*Med. Record.*

TREATMENT OF INFANTILE CONVULSIONS.

In lectures delivered at the Hopital des Enfants Malades, Dr. Jules Simon has recently considered the important subject of infantile eclampsia at length, and his conclusious as to prognosis and treatment are as follows:

In general the prognosis of convulsions is not serious. Convulsions ushering in an acute disease are not dangerous, whereas those occurring at its close are nearly always fatal. Repetition of convulsions renders the prognosis more and more unfavorable. Until urine has been freely voided, an attack of eclampsia cannot be considered as terminated. As to treatment, Dr. Simon takes issue with the late Prof. Trosseau, who advices little or no treatment. Dr. Simon proceeds at once to an active treatment without attempting too fine a diagnosis. He first administers a purgative enema containing senna 5 grams (77 grs.), and sulphate of sodium 15 grams (℥ ss.), or lacking these ingredients, he extemporizes a stimulating injection. Next, at the first subsidence of spasm, he empties the stomach by an emetic. If the attack continue, he himself prepares and administers a hot mustard bath to the little patient. A sedative draught containing bromide of potassium, syrups of codeia and of ether, cherry laurel water, etc., is to be given (to a child fifteen months old) in small quantities, as rapidly as the child will take it.—*Gazette Medicale.*

THE TREATMENT OF EPILEPSY.

Dr. William R. Gowers has recently related his experience in the treatment of epilepsy, and the following are some of his conclusions: In many cases of the disease which were not benefitted by bromide he used borax, and in twelve of them with benefit. The dose is ten or fifteen grains two or three times a day. Oxide of zinc seemed beneficial in a number of cases, and under its use the attacks ceased in three cases. Bromide of zinc and bromide of camphor proved of small or no value. Belladonna and cannabis indica (first used by J. R. Reynolds), combined with bromide, have been very successful. Digitalis and bromide is an excellent combination, even when there is no cardiac disease. Like most physicians, Dr. Gowers relies mainly on the bromides in the treatment of epilepsy. He expresses a preference for the potassium bromide, and gives it in several doses

each day continually for months and years. He, however, also advocates giving one large dose, 15, 20, or even 30 grammes (℥½, ℥⅔ or ℥1, nearly), every two or three days. This produces marked physiological effects, and wards off attacks very well.—*Archives of Medicine.*

Editorial Department.

REMOVAL.

After May 1st, my office and residence will be at 181 Franklin street, to which place all communications for the INVESTIGATOR, except of a business character, should be addressed.

——— A. A. HUBBELL.

READ MATERIA MEDICA.

I have often thought that physicians were deficient in their knowledge of materia medica, and that they would be far more successful in practice if they would devote as much time to reading this branch of medicine as they do others. I was greatly impressed by the following from the *Eclectic Medical Journal* of Cincinnati: "The best and most successful practitioners I have known have been continued students of materia medica. I can recall more than one, not very well versed in the elements of medicine, who made a marked success by a continuous reading of King's Dispensatory."

One of the most interesting "readings" I ever made was the third part of the United States Dispensatory, "Medicines not Officinal," and I would recommend this to my readers. There is a great deal of time spent in writing and reading finely-spun pathological theories. There is no end to books on the nature of disease, but the *real* good books on materia medica and therapeutics are almost as scattering as hen's teeth. The greatest part of the American and United States Dispensatories, together with very many of the works on materia medica of all schools, are nothing but a mass of indefinite foolishness.

I believe remedies have special indications, and that we should study materia medica with a view to obtain a knowledge of these. The trouble with allopathic and most all of the eclectic works on

materia medica is that they do not give definite indications for remedies, but prescribe for the *names* of disease, instead of diseased conditions, while homœopathy gives us *so many* indications for remedies that the student, as well as the busy practitioner, becomes confused, and is unable to prescribe intelligently. It is a question in my mind whether *any* remedy is indicated in more than *one* pathological condition. Of course, a single pathological condition may give rise to many distinct symptoms; but are we to prescribe for the lesion or the symptoms, and if for the lesion, is more than one remedy indicated? Our homœopathic friends tell us to prescribe for the symptoms, and that each symptom may require a different remedy. I have been in the habit of administering medicine for the *disease*, and not the symptoms, and expect that if my diagnosis is correct, and the right remedy is selected, the whole train of symptoms will disappear when the disease which gives rise to the symptoms is cured. These thoughts came to me while sitting in my office, trying to think of something to write for the INVESTIGATOR. I submit them simply as suggestions, and nothing more. Let us study materia medica more.

C. W. B.

OBITUARY NOTICES.

DEATH OF HORATIO N. LOOMIS, M. D.—The subject of this memorial was at the time of his death the oldest member of the Erie County Medical Society, having been an active member for forty-five years, during which period he has been one of the most able and distinguished practitioners in this city. It may be said of him that "he died in the harness," having been in constant practice for more than half a century, and almost up to the day of his death, which occurred March 22, after an illness of four days, at the ripe age of seventy-four years, his disease being pneumonia. He graduated at Fairfield, Herkimer County, N. Y., in 1828. We shall ever remember this noble-hearted man for his genial, generous social nature, for his able council and true devotion to those who required his services. He was ever ready to do his duty, and was well known as the sprightly old doctor who never said no! Night or day, rain

or shine, his patrons knew they could depend upon the kind-hearted, good old Doctor Loomis. We would that there were more like him.

WILLIAM KING, JR.—We are pained to announce the death of the oldest and best known druggist in Buffalo. He died of congestion of the lungs, April 7th, aged 57 years. Mr. King was well known to the profession for his gentlemanly deportment and obliging disposition, always ready to do a friend a favor and encourage the young practitioner. We well remember his words of cheer when we first hung out our "shingle" in this city in 1862. Although a stranger to him, he offered us any pecuniary aid that we might at any time require. By his untimely death the community has lost a good citizen, the profession an able member, and his family a kind and loving husband and father.

DEATH OF MISS LOTTIE A. RATHBUN.—Just as we go to press, we receive the sad intelligence of the death of Miss Rathbun, which occurred April 7, of rubeola, at Osian, Livingston Co., N. Y. The deceased was a student of medicine, and attended a full course of lectures in the College of Physicians and Surgeons of Buffalo, its last session. Miss Rathbun was a lady of more than ordinary ability, an earnest and thorough student (one of the best in the ladies' class), of a kind, amiable and cheerful disposition. She was remarkable for her tender and sympathizing nature, and was almost fastidious in guarding against expressions that might injure the feelings of others. In her death the College has lost a diligent and earnest student, a true and faithful friend, and the profession a member that would have been an ornament. S. W. W.

Book Notices.

Transactions of the Medical Society of Virginia. Richmond, Va.

This small volume is at hand, and contains several valuable papers, among which are Dr. Wm. C. Dabney's on "Cerebral Localization and Cerebral Thermometry;" Dr. J. A. White's on "A Common Functional Eye Trouble;" Dr. C. K. Cullen's on "New Remedies;" discussion on "Summer Complaints of Infants," etc. A. A. H.

Anæsthesia. By W. C. BARRETT, M. D., D. D. S., Buffalo, N. Y.

We are in receipt of this interesting paper, and find it a valuable addition to the literature of the subject. A. A. H.

Lectures upon Diseases of the Rectum and the Surgery of the Lower Bowel. By W. H. VAN BUREN, M. D., LL. D. (Yalen), Prof. of the Principles and Practice of Surgery in the Bellevue Hospital Medical College, etc. N. Y. D. Appleton & Co. Second Edition. 1881. 8vo. pp. 420. For sale by Ulbrich & Kingsley, Buffalo, N. Y. Price, cloth, $3.00.

The first edition of this work was issued several years ago. There have been many changes, "improvements," and "new-fangled notions" in rectal surgery since that time; but the author has been on the alert, and with wise discretion has selected such ideas and methods as are practical and valuable, and has incorporated them in the present edition. To do this the work has been enlarged, and is now an octavo instead of a duodecimo volume. The following are some of the subjects very clearly and practically treated of: Pruritus ani, hemorrhoids, prolapsus ani, rectal tumors (including cancer), abscess, fistula in ano, fissure, ulcers of anus and rectum, stricture, congenital malformations, foreign bodies, etc. It is a good work, and in its present revised and enlarged form will undoubtedly take the place of other and foreign works on these subjects. American physicians like *good* American works, of which this is one. A. A. H.

A Treatise on Diseases of the Joints. By RICHARD BARWELL, F. R. C. S., Senior Surgeon and Lecturer on Surgery, Charity Cross Hospital. Wm. Wood & Co., Publishers. For sale by J. H. Matteson, Buffalo, N. Y.

This is the second edition of this work, the first having been issued in 1861, and is enlarged and thoroughly revised. By the physician in general, and especially the surgeon, this volume will be received with marked approbation. Illustrated with ninety-one engravings, and containing over four hundred pages of reading matter, the author has endeavored to present a work concise and yet complete in all its parts. The various affections treated of are amply illu-

strated by the history of many cases that have come under the personal observation of the writer. This work is the March volume of "Wood's Library," and the publishers have certainly outdone all former efforts by its publication. C. F. H.

A Text Book of Human Physiology, designed for the Use of Practitioners and Students of Medicine. By AUSTIN FLINT, Jr., M. D., Prof. of Physiology and Physiological Anatomy in Bellevue Hospital Medical College, etc. D. Appleton & Co., N. Y., Publishers. Third Edition. 1881. 1 vol. 8vo. pp. xviii, 978. For sale by Ulbrich & Kingsley, Buffalo, N. Y. Price, cloth, $6.00; sheep, $7.00.

Three editions of this work have been issued in less than five years, thus showing the appreciation it has met in the profession. As a complete treatise upon physiology it cannot be excelled. The present edition has been thoroughly revised, and several sections have been rewritten. The status of physiological knowledge is brought fully up to the present time, and the student and practitioner can consult this treatise with confidence and satisfaction on any subject pertaining to the science. With the small, but clear, type that the publishers have used, and the large size of the page, a vast amount of matter is compressed into the volume, and the whole offered at a price within the reach of all. As physiology is the basis of pathology, the former should have great prominence in all medical study, and no better or more complete work in one volume can be found. The book is not only excellent and full in matter, but the publishers have done their part most beautifully. The illustrations are particularly fine, and are many in number. Let every student of physiology who wishes to get the principal details of the subject in full, peruse "Flint's Text Book." A. A. H.

We wish to call especial attention to WALSH'S **Physician's Hand Ledger,** as well as his **Combined Call Book and Tablet.**

Having used these books daily for the past three months, we are satisfied that they are nearest perfect of anything of the kind ever offered to the profession. No physician should be without them.

S. W. W.

News and Miscellany.

ACCORDING to a Chicago doctor, the consumption of opium in that city is alarming. He says that fifty druggists have 235 regular customers.

KING'S "Oldest Drug Store" in Buffalo is still in operation, where everything desired by the physician can be found.

THE ANTI-VIVISECTION BILL of Mr. Bergh to prohibit experiments on animals, which was introduced into the New York Legislature during the present session, has been "killed"—a fate which it justly deserves.

W. H. TIBBS, druggist, 235 Main street, Buffalo, N. Y., keeps a full line of all surgical appliances, and is agent for Parke, Davis & Co., of Detroit.

NEW MEDICAL SCHOOLS.—Two new medical schools, one regular and one eclectic, have recently been organized in St. Louis.—*Med. Record.* Is not every lawfully organized and properly conducted medical school "regular"?

JOHNSTON'S FLUID BEEF is far ahead of all other similar preparations. Powell & Plimpton, agents, Buffalo, N. Y.

PANNA, NEW REMEDY FOR TAPE-WORM.—Panna is the root of Aspidium athamanticum, whose habitat is the Cape of Good Hope. It is said to be the best, mildest and safest remedy against tape-worm. About six grammes, divided into three doses, are sufficient for a complete cure, so it is said. Colleagues might like to try it in some of those old cases that defy everything.

MERRELL, THORP & LLOYD, of Cincinnati, O., make the most reliable preparations in the country. Read advertisement.

A DEATH FROM ETHER recently occurred at Jefferson College Hospital, Philadelphia. The patient was a woman twenty-six years old, on whom Dr. J. R. Levis operated for anchylosis of the hip. The operation was safely completed, but she did not rally from the anæsthetic, and died an hour and a half after its administration was commenced. A post-mortem revealed nothing obnormal.

BROMIDROSIS.—Remedies for bromidrosis abound in the journals. The latest one is a solution of chloral in alcohol and water, applied several times a day. An application of equal parts of belladonna ointment and glycerine we remember to have seen lately as a highly praised remedy. One great difficulty in the way of removing the odor lies in the stockings and shoes. These must be treated as energetically as the epidermis.

MALTINE is still advancing, and other malt preparations are left far in the rear as regards reliability and nutritive value.

AMPUTATION OF THE HIP-JOINT.—The *Dublin Journal* gives an account of a successful case of amputation of the hip-joint. Davy's method of arresting hemorrhage by the introduction of a lever into the rectum was adopted, and the operation was almost a bloodless one. Lister's antiseptic dressings were vigorously carried out. To the bloodlessness of the operation and the antiseptic precautions is attributed the success. This was probably the first successful amputation at the hip, on an adult, in Ireland. The operation was performed for disease of the hip. The age of the patient, and the large extent of the femur involved, decided the operator against excision.

LACTOPEPTINE needs no recommendation. You have but to try it once to be convinced that it hasn't an equal in cases of indigestion, dyspepsia, cholera infantum, etc. Read advertisement.

RESULT OF MEDICAL LEGISLATION.—From the *Medical Register* of the Illinois State Board of Health for 1880 we learn that "the total number of practitioners in the State when the law regulating the practice of medicine went into effect—in July, 1877—was about 7,400. Of these, 3,600 (less than half) were graduates or licentiates, the remaining 3,800 being unqualified practitioners. The graduates and licentiates at the present time number 4,825, and the non-graduates 1,500; a diminution in the total number of practitioners of 1,075. The number of itinerants in the State in 1877 was 73; in 1880 only 9. The number of 'cancer doctors' in 1877 was 23, in 1880 only 4." This result offers surely a most eloquent plea for sound medical legislation.